



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

January 6, 1992

Nelson Wong, P.E.  
Carrier Corporation  
855 Anaheim - Puente Road  
P.O. Box 1234  
City of Industry, CA 91749

RE: Carrier A.C. (Collierville) Remedial Investigation  
(RI) and Feasibility Study (FS) Review

Dear Mr. Wong:

Enclosed is the Carrier A.C. RI Response to Comments (November 21, 1991) review. The final RI should be submitted January 28, 1992. Before submitting the final RI, Carrier should present the proposed soil clean-up goals to EPA for approval.

A review has also been conducted of the Carrier A.C. Site FS. It is understood that the FS will require revisions due to the need to finalize the RI and the resultant impact of the RI on the FS. Specifically, revisions to risk assessment may result in changes to the soil remediation goals related to direct contact risk. Also, the soil remediation goals to prevent migration of contaminants to ground water will also change based upon the use of a different migration model.

The major concerns after reviewing the FS are: 1) an adequate ground-water interdiction system was not presented; 2) not enough information was provided regarding the city water supply; 3) treatment alternatives do not address metal removal; 4) present worth values were derived using a 10 percent discount rate instead of the recommended 5 percent discount rate; 5) an option not considered was simple GAC treatment of the raw contaminated groundwater; and 4) the remedial action objective, preventing further contamination of the Memphis Sands, was not addressed in the comparison of alternatives. Based upon these issues and others mentioned in the enclosed FS review report, the Draft FS (September 20, 1991) is disapproved. Please make appropriate revisions and submit the revised FS no later than February 25, 1991.



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Also enclosed is the current Carrier A.C. FY 92 ROD schedule.

If you have any questions, please contact me at (404) 347-7791.

Sincerely,

*Beth Brown*

Beth Brown  
Remedial Project Manager

Attachment

cc: Lee Thomas, GWTSU  
Glenn Adams, GWTSU  
Jordan English, TDHE  
Phil Coop, EnSafe  
Bob Marbury, B&V

EPA REVIEW ON THE RESPONSE TO COMMENTS  
CARRIER A.C. (COLLIERVILLE) SITE

A review has been conducted on the Carrier RI Response To Comments (November 21, 1991). In general the responses appear to be acceptable with the exception of the determination of the soil clean-up goals.

The following outstanding issues should be resolved, since they may have a substantial impact on the modeling and selection of remedial alternatives.

**Soil Clean-Up Goals**

Carrier has proposed to conduct some modeling of the site utilizing a more sophisticated model than was utilized by EPA. As part of the proposed model, it would allow mixing and dilution over a 2,500 foot horizontal zone between the site and the Collierville Municipal Water Supply Well Field. Such a large zone is unacceptable since it allows for the degradation of the intervening portion of the Memphis Sands which are a protected Class I Aquifer under the EPA Ground-Water Protection Strategy. The distance allowed for the horizontal delineation of the mixing zone should be at or near the downgradient portion of the waste site. In another issue, Carrier maintains that the soil clean-up goals are not attainable through in-situ treatment and would be difficult to remediate with ex-situ treatment.

**Groundwater Risk**

Response to Comments 35 and 39 conflict with one another. Response to Comment 35 states that no exposure point exists and that you are reviewing the probability of direct exposure by contaminated ground water. Response to Comment 39 states that groundwater ingestion rates and risk will be calculated. EPA agrees that the groundwater ingestion rates and risk should be calculated and Response to Comment 35 is inaccurate.

EPA REVIEW OF THE DRAFT FEASIBILITY STUDY  
CARRIER A.C. (COLLIERVILLE) SITE

## 1.0 GENERAL COMMENTS

### Ground-Water Remediation

Ground-water remediation is not proposed except through the continued operation of the contaminated municipal water supply well adjacent to the property. If the plume has originated as a result of contaminated water traveling from the spill areas along the top of the clay confining lens to the Memphis Sands, it is expected that the highest concentrations of contamination would be located near the edge of the clay confining lens. Under the scheme proposed, the plume would have to move further down gradient to the extraction well/municipal water supply well in order to be captured. If the capture zone of the existing extraction well happened to include the entire plume, it would be adequate. As shown in the attached figure (discussed in detail in the next section) which is a model of the capture zones of the municipal water supply well and the five extraction wells, the capture zone of the municipal water supply well is actually somewhat restricted in extent. Such a system is not protective of the Memphis Sands since it will not result in the ground-water clean-up goals being met until the plume moved down to the city water supply well. The plume should be remediated in place rather than allowing it to move downgradient and expand significantly before extraction takes place.

### Ground-Water Extraction System at Clay Pinch Out

A ground-water extraction system is proposed as part of one alternative to protect the Memphis Sands from continued contamination from the overlying shallow aquifer at the point where the clay confining unit pinches out south of the site. In order to evaluate the effectiveness of the containment system, the parameters for the Memphis Sands in Table 3.1 of the FS along with supplemental information such as direction of ground-water flow from the RI Figure 5-4 were collected for modeling the capture zones for the site. The WHPA code (WHPA 2.0) was used to evaluate the extraction system as shown on the attached Figure. This preliminary modeling indicated that the capture zones of the extraction wells do not converge to form a complete barrier at the pinch out of the clay confining zone. Further, the plume in the Memphis Sands is not completely within the capture zones of the extraction wells. Thus the

existing well network should be modified to ensure that the Memphis Sand is protected from additional contamination at the clay pinchout and the extractions wells are capturing the entire plume. It is likely that shallow extractions wells should be placed at the edge of the clay pinch out to accomplish this objective. Since the well network was inadequate the FS did not adequately evaluate ground-water remediation at the site and an alternative that was adequately protective of the ground-water resource was not evaluated in the FS.

### City Water Supply

Although EPA agrees the majority of the aqueous phase contamination is contained by the city wells' pumping and their operation should continue, their effectiveness in containing all the site-related groundwater contamination has not been demonstrated. As stated in the FS, the long-term reliability of the city wells pumping containing the plume is contingent upon them being continually operated. Do the city wells continuously pump, or are there times when the wells are not in operation? If discharge of treated ground water from the interdiction wells is considered, will the city need the water from the interdiction wells and the city wells at all times? During the times of less water demand, how will it effect the remediation at the Superfund Site? Will remediation continue and the water stored in holding tanks? Will some of it be reinjected? If the water is to be stored, is a holding tank or improvements to the city's current system necessary, and what are the associated costs? This kind of information is necessary to properly evaluate and compare the residual treatments and associated costs.

### GAC Treatment

The FS proposed two options for the treatment of extracted groundwater: 1) air stripping with GAC offgas treatment, and 2) UV/peroxide treatment. An option that was overlooked was simple GAC treatment of the raw contaminated ground water. The influent concentration of TCE, estimated at 200 ug/l, is easily treated by GAC in a cost-effective manner. By sending the extracted ground water directly to GAC, capital costs associated with the air stripper and UV units are eliminated. O&M costs would include regeneration or replacement of spent carbon (also necessary with air stripping emission control). Power requirements to run blowers (air stripping) or power lamps (UV oxidation) would be reduced. No additional air emission control for ground water treatment would be needed. Why was this technology not evaluated?

## Present Worth Values

Present worth values for alternatives in the FS were derived using a 10 percent discount rate. The use of 10 percent may present a cost estimate that is low, especially with today's economy. EPA guidance suggests a 5 percent discount rate. It is recommended that a sensitivity analysis be performed around discount values. Suggested rates to evaluate would be 3, 5, and 7 percent.

## 2.0 SPECIFIC COMMENTS

1. Page 7, Conceptual Site Model, Paragraph 1: Is there perched water in addition to the shallow intermittent groundwater? Please clarify.
2. Page 7, Conceptual Site Model, Paragraph 3: It is stated that groundwater slowly moves along the top of the Jackson Clay toward the southern and western extent. Phase III data also indicates migration is towards the north as well.
3. Page 7, Conceptual Site Model, Paragraph 3: The word "competency" implies the ability to resist internal flowage upon compression. A better word is "thin".
4. Page 9, Paragraph 1: The No Action alternative should not consider any remedial technology or institutional controls.
5. Page 16, Section 1.2.5.1: Please see comment 2.
6. Page 17, Section 1.2.5.2: The text states the aquifer piezometric surface indicates flow at the site in the north to northwest direction. Is this flow dependent upon the Collierville wells pumping?
7. Page 17, Section 1.2.6: References are made to [TDHE, 1986], but this reference is not included in the reference section.
8. Page 27, Section 1.3.2.2: Is there adequate control for high confidence in the inferred thickness of the "Jackson Clay" across the Site, and especially in the NW direction?
9. Pages 29-31, Section 1.4: The summary of the Baseline Risk Assessment (BRA) should include a table which provides a summary of each pathway and the risks associated with that pathway. An example would be Table 8-10 on page 205 of the draft RI/BRA.
10. Page 31, Section 1.4.3: The sentence before the bullets is misleading. Other alternatives would also produce the benefits described in the 2nd and 3rd bullets.
11. Page 36, Section 2.1.2.4.2: Please see Section 300.430(G)(7)(i) for the effectiveness definition. The definition in the text is for implementability.
12. Page 37, Section 2.2.1: It is suggested in this section that lead and zinc will be remediated by technologies applied to organic contaminants. These contaminants must be carried through the FS process and remedial actions specific to the metals problem presented.

13. Page 37, Section 2.2.2.1: The discussion concerning the use of the perched aquifer is misleading. The upper and lower aquifers should be considered as one ground water system where the clay unit pinches out.

14. Page 37, Section 2.2.2.1: An additional remedial action objective for ground water should include preventing further contamination of the Memphis Sands.

15. Page 38, Paragraph 1: The MCLs are stipulated in the Safe Drinking Water Act, not the Clean Water Act.

16. Pages 38-44, Table 2-1 and 2-4: These tables should also include the drinking water standards for other contaminants of concern (i.e., lead, zinc, tetrachloroethylene, and 1,2-dichloroethane).

17. Page 38, Section 2.2.2.2: This section should be updated upon approval of the BRA and soil cleanup goals based upon migration to ground water.

18. Page 40, Table 2-2: The ground-water protection standard for 1,2-dichloroethylene is 70 ug/l not 700 ug/l. The other contaminants of concern should be listed in this table. The use (or reference) of reference doses (RfDs) in the last column of the table is unclear and should be explained.

19. Page 43, Table 2-3, Federal Requirements: The SDWA MCL's are applicable ARARs.

20. Page 43, Table 2-3, State Requirements: The Tennessee Water Quality Act and its criteria should be considered as a chemical-specific ARAR.

21. Page 44, Table 2-4: The Ambient Water Quality Criteria for 1,2-DCE were not included on this table. They are as follows:

Freshwater Acute Aquatic: 11,600 ug/l  
Water and Fish Ingestion: 0.033 ug/l  
Fish Consumption Only: 1.85 ug/l

This table should be updated to include the metals lead and zinc, as well as other contaminants of concern.

22. Page 45, Section 2.3.1.1: Maximum Contaminant Level Goals (MCLGs) are not non-enforceable guidelines as stated, but under 40 CFR 300.430(e)(2)(i)(B) are specifically cited as criteria to be attained by remedial actions except when the MCLGs are set at zero. Similarly, the proposed Maximum Contaminant Levels (MCLs) are not non-enforceable as is also incorrectly stated in this section, but are included in the ROD as ground-water clean-up goals so that when they



become final, the ROD will be current and will no require updating.

23. Page 56, Table 2-7: The RCRA Landfill requirements would be an "applicable" ARAR should a landfill option be selected as a final remedy.

24. Page 56, Table 2-7: The RCRA land disposal restrictions are an "applicable" ARAR if placement occurs.

25. Page 57, Table 2-7: Pretreatment standards are found in 40 CFR 403.5 not 40 CFR 122.

26. Page 57, Table 2-7: The floodplain management policy is a "to-be-considered" ARAR.

27. Page 61, Section 2.3.3.6: See comment 24.

28. Page 65, Table 2-8: This table should be updated upon agreement of soil remediation goals. An additional remedial action objective is to prevent the Memphis Sands from further contamination.

29. Page 65, Table 2-8: This table is somewhat unclear. The general response actions should be for all remedial action objectives. It appears in the table that no action/institutional controls and containment actions are for protection of human health and not the environment. Also, the soils > 8000 ug/kg TCE are for protection of human health.

30. Page 66, Section 2.4.2: This section, along with Table 2-9, must be updated with EPA approved remedial goals.

31. Pages 61-74, Figures 2-1 through 2-7: Please include north arrows for clarity.

32. Page 77, Table 2-11: Physical treatment of the groundwater by coagulation, precipitation, and solids separation is applicable to removal of dissolved metals, not organic contaminants, from aqueous waste.

33. Page 78, Table 2-11: Treatment of ground water by biological methods is screened out because it is "not feasible due to soil type". Soil type has nothing to do with treatment of ground water. Soil type may however inhibit the extraction of ground water for the upper aquifer, but certainly not the Memphis Sands. Biological treatment of ground water should be retained in the initial screening.

34. Page 78, Table 2-11: Some reinjection of treated ground water should be considered if required to develop "efficient" gradient for extraction. Appropriate Class V injection well requirements would have to be met.

35. Page 80, Table 2-11: Biological treatment of soils by composting should be screened out because of the volatile nature of contaminants. Air emission from composting would require additional treatment and monitoring.

36. Page 80, Table 2-11: In-situ biological treatment of soil contaminants is screened out because of soil types.

It is agreed that the permeability of the soil is sufficiently low to inhibit effective biological treatment. However, this same statement could be used for soil vapor extraction, which was retained. The use of soil type to screen technologies should be used consistently throughout the FS.

37. Page 81, Section 2.5.1.5: None of the treatment methods proposed address metal contamination. Why are metals not addressed in the remediation scheme?

38. Page 82, Section 2.5.1.6: Reinjection of ground water should be considered if required to develop "efficient" gradient for extraction.

39. Page 82, Section 2.5.2.1: The no-action alternative should not consider any remedial technology; the inclusion of the city well field and the NRS is inappropriate. The statement that the ground water contaminant plume in the Memphis Sands is contained by the city well field has not been proved or disproved at this point.

40. Page 82, Section 2.5.2.1: The town's drinking water must meet the Safe Drinking Water Act (SDWA) MCL's, not the Clean Water Act.

41. Page 83, Section 2.5.2.3: This section should also include discharge to the Collierville water supply.

42. Page 84, Section 2.5.2.5: Treatment of ground water by physical means other than stripping are not discussed in this section.

43. Page 84, Section 2.5.2.5.1: See comment 38.

44. Page 84, Section 2.5.2.5.1: It should be noted in the air stripping discussion that off-gases from the process must be treated to appropriate State or Federal air standards.

45. Page 84, Section 2.5.2.5.2: Carbon absorption is not effective in removing vinyl chloride from liquid or vapor phase waste. This could present a treatment problem if significant concentrations of vinyl chloride are experienced.

46. Page 85, Section 2.5.2.5.5: Aeration of soil during composting would result in air stripping and very little actual biological treatment.

47. Page 86, Section 2.5.2.5.6: This discussion of thermal treatment of contaminated soil does not include low temperature thermal desorption (LTTD). This process would be highly effective for volatile organics at the site, and is significantly less expensive than traditional offsite incineration. Should soil volumes change with the approved soil remediation goals, it may be a cost effective alternative.

48. Page 87, Section 2.5.2.6.1: Although retained in Table 2-11, the disposal of ground water via reinjection is not discussed in the section. The pros and cons of this option should be considered.

49. Page 87, Section 2.5.2.6.2: This section should include a discussion of on- and off-site landfill. These options were retained in Table 2-11.

50. Page 88, Table 2-12: The No Action alternative should not include any remedial technology.

51. Page 88, Table 2-12: Retention of the new community well option as a contingency alternative might be considered.

52. Page 89, Table 2-12: A cap reduces or minimizes percolation of contaminants to ground water, it does not prevent.

53. Page 90, Table 2-12: As stated above, reinjection might be useful as an engineering control.

54. Page 90, Table 2-12: It should be noted in the table that the discharge of ground water to the public water supply would occur only after treatment to appropriate levels.

55. Page 92, Table 2-13: This table retains composting as an option for soil treatment, however it is eliminated in the text on page 86.

56. Page 92, Table 2-13: LTTD is not included as a thermal option. There is not an explanation in the text or screening tables to explain this.

57. Page 93, Table 2-13: Soil flushing is eliminated due to low soil permeability. This same screening rationale could be used to eliminate soil vapor extraction.

58. Page 93, Table 2-13: Two landfill options are retained as process options. Since there is no discussion in the text, it is assumed that they are carried through the detailed evaluation. These options could be eliminated due to the treatment requirements necessitated by the RCRA land ban.

59. Page 94, Table 2-14: See comment 53.

60. Page 94, Table 2-14: The use of the city wells in the No Action alternative is inappropriate.

61. Page 94, Table 2-14: Composting has been eliminated in the FS text and should be removed from the table.

62. Page 95, Section 2.5.3.1: This section describes why certain options were eliminated from consideration. Several process options, such as surface water diversion; asphalt, concrete, clay, synthetic caps; composting; and vapor extraction are retained in the first screening but eliminated from further consideration. Please include all options retained in the first screening but eliminated from further screening.

63. Page 96, Section 2.5.3.1.5: Injections of large volumes of water is not feasible, but as indicated earlier lesser volumes injected might help to control gradients for optimum extraction as well as serve to flush contaminants from soils.

64. Page 96, Section 2.5.3.2.3: This sentence appears to be a run-on sentence.

65. Page 99, Figure 3-1: Ground water technology types should include access restrictions and alternate water supply.

66. Page 99, Section 3.1, General Comment: The effectiveness evaluation discussions should also focus on the alternatives' effectiveness in meeting the remedial action objectives. For example, alternatives 1, 3, and 5 do not meet prevention of further contamination of the Memphis Sands.

67. Page 99, Section 3.1.: The No-Action Alternative should not include any remedial technology or institutional controls. Monitoring may be included in the No-Action Alternative.

68. Page 99, Section 3.1, Paragraph 3: Again, the ability of the city well to contain the ground water plume has not been established. Are wells established outside the area of influence of the city wells that show no TCE? Are backup controls in place at the city wells in case of failure of pumps or other equipment?

69. Page 99, Section 3.1: Please clarify whether all of the alternatives have common components. The following review comments take into consideration that the city well treatment system and the North Remediation System are common components of all the alternatives.

70. Page 100, Section 3.1.1: The No Action alternative should not include the city well treatment system, the North Remediation System or institutional controls.

71. Page 100, Section 3.1.1: This alternative should be compared against effectiveness, implementability, and cost criteria.

72. Page 104, Paragraph 2: The rationale for the elimination of surface water discharge should be explained. Also, the City's involvement, as discussed in the October 21 meeting, in the disposal of treated ground water to the public water supply system should be explained.

73. Page 104, Section 3.1.3: EPA is unaware of federal requirements that do not allow direct discharges of VOCs to the atmosphere.

74. Page 104, Section 3.1.3: If vinyl chloride is anticipated in significant quantities in the process water, then the effectiveness of the granular activated carbon in treating the VOCs in the vapor phase is questionable. Vinyl chloride does not readily adsorb to GAC.

75. Page 105, Section 3.1.4: Optimum treatment of VOC by the UV/oxidation process occurs in the range of 220 nm wavelengths. Treatability studies on the contaminated ground water must be performed before process design. These studies will determine if pretreatment is necessary.

76. Page 107, Section 3.1.4.3: Table 3-2 is missing.

77. Page 107, Section 3.1.5: Paragraph 1 states that unit operations must be combined with SVE to treat air and entrained moisture. What unit operation is planned for the treatment of the entrained moisture?

78. Page 110, Paragraph 1: The effectiveness of the city wells in containing the contaminant plume in the Memphis Sands has not been fully demonstrated.

79. Page 110, Section 3.1.5.2: It is stated that a monitoring system should be instituted to measure process operating efficiencies and carbon adsorption effectiveness. What about thermal destruction effectiveness?

80. Page 110, Section 3.1.5.3: Which technology, carbon adsorption or thermal destruction, was used to estimate costs?

81. Page 111, Section 3.1.6.1.1: Please state what the "minimal" adverse short-term effects associated with the SVE are.

82. Page 114, Paragraph 2: A greater concern during soil excavation, other than dust control, is the control of VOC emissions. A vapor suppressant will be required.

83. Page 114, Section 3.1.7.1: Discuss what the short-term effects of the alternative are.

84. Page 115, Section 3.1.7.2: The effectiveness of the city wells in containing the contaminant plume in the Memphis Sands has not been fully demonstrated.

85. Page 116, Section 3.2: Alternative 2a and 2b are eliminated from further analysis. These alternatives should not be proposed because of their ineffectiveness in meeting remedial action objectives.

86. Page 118, Section 4.1: The detailed analysis should be based upon the requirements stipulated in the National Contingency Plan.

87. Page 118-144, General Comment: Evaluation criteria inconsistencies were found in reviewing the detailed analysis. Please refer to the Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, specifically, Figure 6-2 and Tables 6-1 through 6-4. The figure and tables detail the analysis factors and specific factor considerations that should be considered for each alternative. Please revise appropriate sections.

88. Page 121, Present Worth Analysis: The test at this point states that a discount rate of 5 percent is used in the analysis. However, the remaining test uses a 10 percent discount rate.

89. Page 125, Section 4.2.1.1: The No Action alternative should not contain the City water well system or the North Remediation System.

90. Page 125, Section 4.2.1.6: National Emission Standards for Hazardous Air Pollutants are found in 40 CFR 61 instead of 161.

91. Page 126, Section 4.2.2.1, Paragraph 2: The ACGIH Threshold Limit Value (TLV) and the OSHA Permissible Exposure Limit (PEL) for trichloroethene are both 50 ppm.

92. Page 127, Section 4.2.2.2: The listed remedial goals must be revised and approved by EPA in the final RI.

93. Page 128, Section 4.2.2.5: The cost of treating SVE emissions by thermal methods would be significantly higher than treatment by activated carbon. The text introduces catalytic treatment at this point, however the previous text includes only GAC and thermal offgas treatment. No actual costing of thermal offgas treatment is included in the appendices, only GAC treatment costs.

94. Page 129, Paragraph 1: The DOT transportation requirements must be met when hauling spent GAC.

95. Page 132, Section 4.2.3.4: The verbage in this passage, and the lack of it in other passages describing implementability, infers that this is the only alternative that is dependent on development and compliance of HASP and ARAR's.

96. Page 131, Section 4.2.3.3: Air stripping removes contaminants from the ground water. It does not destroy the organic compounds.

97. Page 132, Section 4.2.3.4: Please provide further description of the ground-water treatment required.

98. Page 134, Section 4.2.4.4: See comment 95.

99. Page 136, Paragraph 4: A water spray would not be effective in controlling VOC emissions during excavation.

100. Page 137, Section 4.2.5.3: The stated soil volume should be revised upon final determination of soil remediation goals.

101. Page 138, Section 4.2.5.5: Costs should be revised based upon soil volumes determined from new remediation goals.

102. Page 140, Section 4.2.6.2: First paragraph should state that surface soil would be excavated to only 8000 ug/l (this number may change based upon RI revisions).

103. Page 145, Section 4.3: The comparative analysis should include a narrative discussion describing the strengths and weaknesses of the alternatives relative to

one another with respect to each criterion, and how reasonable variations of key uncertainties could change the expectations of their relative performance.

104. Page 147, Table 4-2: Alternative 3 includes treatment with GAC or catalytic incinerator.

105. Page 147, Table 4-2: The "Community Chemical Risk" should be similar for alternatives 3, 4a, and 4b. The potential exposure from VOC emissions from SVE would occur for all three proposed alternatives.

106. Page 147, Table 4-2: Alternatives 1, 3, and 5 do not achieve the RAO, prevention of further contamination of the Memphis Sands.

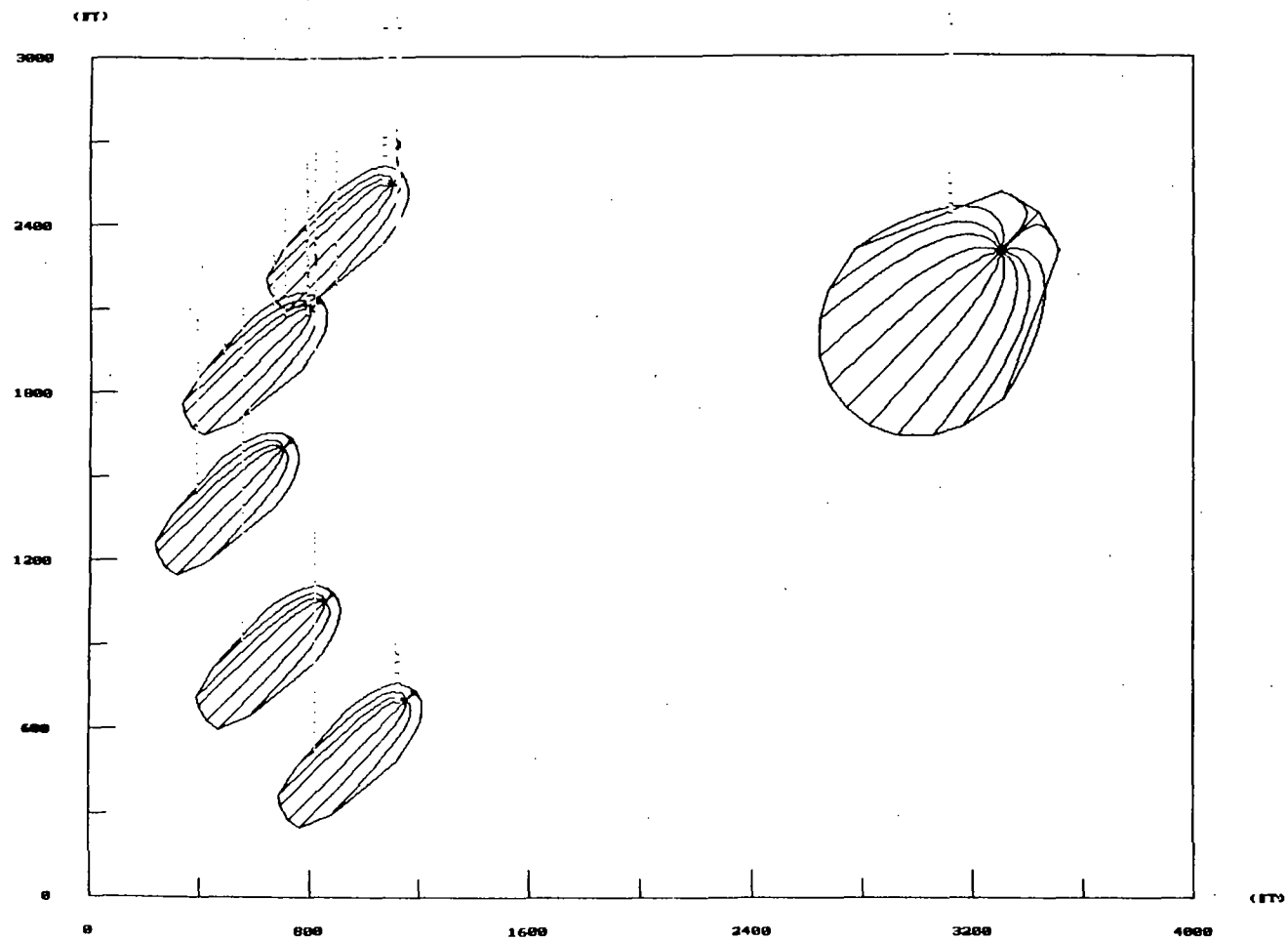
107. Page 147, Table 4-2: Do not alternatives 4a, 4b, 6a, and 6b all provide for below  $10^{-6}$  cancer risks to child residents?

108. Page 148, Table 4-2: Those alternatives which specify the use of GAC should indicate under Material and Service that GAC will require continued replacement and maintenance.

109. Appendix A: Charts need to be labeled for ease of reference.

110. Appendix A: The fourth chart is confusing. Is drawdown being measured at the well head? Explanation needs to be provided.





CARRIER A.C. (COLLIERVILLE)  
FY92 ROD SCHEDULE

PRP Addresses EPA FS Comments	Jan 06 - Feb 25
2nd draft FS due from PRP	Feb 25
Peer Review on 2nd draft FS	Feb 25 - Mar 06
Internal FS Review Meeting	Mar 03
Minor Changes to FS by PRP (if necessary)	Mar 06 - Mar 20
EPA Approval of FS	Mar 20
Prepare Proposed Plan Fact Sheet	Feb 07 - Mar 19
Draft Proposed Plan to State (ASAP) and Peer Review. Notify Public Meeting Participants	Mar 19 - April 02
Revise Proposed Plan	April 02 - April 10
Prereferral Package to DOJ (including CD, SOW and Mini Lit report)	Feb 20
Send Proposed Plan Fact Sheet to Public	April 10
Administrative Record in Library	April 10
Paid Public Notice in Newspaper Announcing the Public Meeting	April 19
Public Meeting	April 29
Public Comment Period	April 14 - May 14
Extension on Public Comment Period (if requested)	May 14 - June 13
Compile Responsiveness Summary	April 14 - May 28/June 29
Responsiveness Summary Complete	May 28/June 29
Draft ROD to TN/HQ for Comments	June 18
Peer Review of ROD	June 22 - July 06
Comments Due from Peer Review	July 06

Revise Draft ROD	July 06 - July 20
Final ROD to State for Concurrence (last possible date)	July 20
Don Guinyard Briefing	July 31
State Concurrence Letter Due	Aug 7
Pat Tobin Briefing/ROD Signature Date	Aug 7
RD/RA Start - Send Special Notice Letters to PRPs	Aug 7 - 21

Revision #1 11/18/91